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VARIABLE PEDAL CHARACTERISTICS

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Initial situation:
Currently, pedal characteristics are fixed characteristics: pedal travel to response are fixed over the entire travel.

The problem here is the wide performance range of the function operated by the pedal: sensitive operation is difficult depending on the pedal characteristic curve, depending on the current pedal position.

A challenge in the pedal characteristic is that there must always be a comprehensible and plannable action for the user from the input variable change.

Current solutions are shown in Fig. 1 and 2.

Solution:
Execution of a variable characteristic curve, which can be force or displacement related.

In particular, the variability should be so pronounced that a small input variable change causes a small output variable change.

In this case, it must be taken into account for the characteristic curve, especially in the area of the upper and lower limits, that these must intersect the minima and maxima for the output variable.

This results as a solution for example in a curve shape rotating around the current pedal point.

Another solution is an action curve that shifts with the pedal position. (Fig. 3)

Advantages:
The effect is comprehensible and predictable by the customer

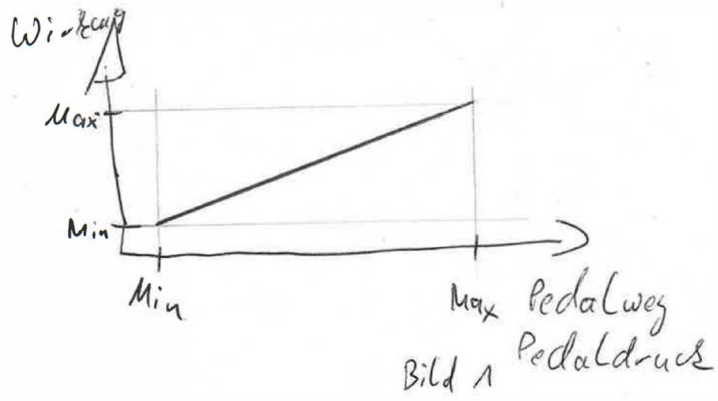
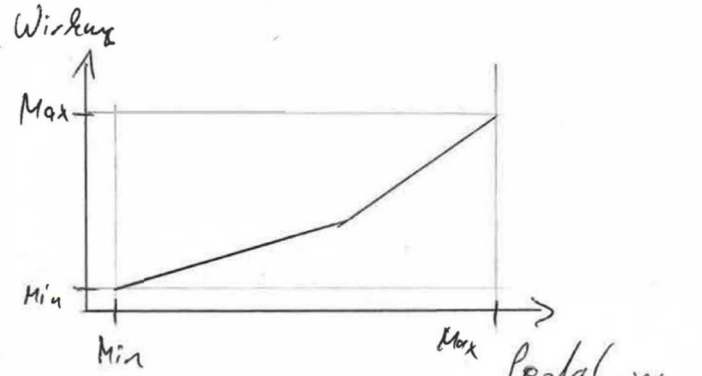


Bild 1



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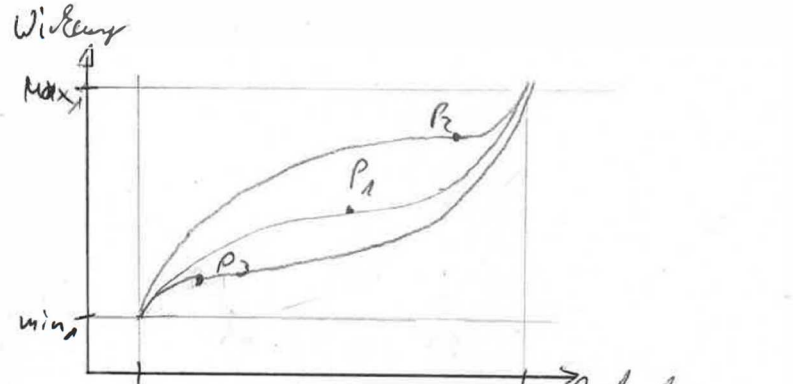

Bild 3